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Discussion papers submitted by major groups

Note by the Secretariat

Addendum

Contribution by indigenous people**

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A growing body of Western scientific evidence now suggests what Indigenous Peoples have expressed for a long time: life as we know it is in danger. We can no longer afford to ignore the consequences of this evidence. We must learn to live with this shadow, and always strive towards the light that will restore the natural order. How western science and technology is being used needs to be examined in order for Mother Earth to sustain life.

The four elements of fire, water, earth and air sustain all life. These elements of life are being destroyed and misused by the modern world. Fire gives life and understanding, but is being disrespected by technology of the industrialized world that allows it to take life such as the fire in the coal-fired powered plants, the toxic waste incinerators, the fossil fuel combustion engine and other polluting technologies that add to greenhouse gases. Coal extraction from sacred earth is being used to fuel the greenhouse gases that are causing global climate warming.

Indigenous prophecy now meets western scientific prediction. What we have known and believed, you also now know: The Earth is out of balance. The plants are disappearing, the animals are dying, and the very weather — rain, wind, fire itself — reacts against the actions of the human being.

– *Excerpts from the Albuquerque Declaration, Native Homelands Climate Change Workshop Summit, November 1998*

I. Introduction

1. The present indigenous major group discussion paper is submitted in preparation for the fourteenth session of the Commission on Sustainable Development, to be held at United Nations Headquarters New York from 1 to 12 May 2006. The fourteenth session begins the second cycle of the Commission's new work programme. At the session, the Commission will review progress in the following areas: energy for sustainable development; industrial development; air pollution/atmosphere; and climate change.

2. The review session will also address cross-cutting issues: poverty eradication, changing unsustainable patterns of consumption and production, protecting and managing the natural resource base of economic and social development, sustainable development in a globalizing world, health and sustainable development, sustainable development of small island developing States, sustainable development for Africa, other regional initiatives, means of implementation, institutional framework for sustainable development, gender equality, and education.

3. Representatives of countries throughout the world declared at the World Summit on Sustainable Development, held in Johannesburg, South Africa, in 2002, through the Johannesburg Plan of Implementation and the Political Declaration, that the Commission should continue to be recognized as the high-level commission on sustainable development within the United Nations system and should serve as a forum for consideration of issues related to integration of the three components of sustainable development.

4. The three components of sustainable development are economic development, social development and environmental protection, which are interdependent and mutually reinforcing pillars. Poverty eradication, changing unsustainable patterns of

production and consumption, and protecting and managing the natural resource base of economic and social development are overarching objectives of, and essential requirements for, sustainable development.

5. The collective rights of indigenous peoples and their vital role as participants in sustainable development outcomes and implementation activities were recognized by over 100 Heads of States and Government in paragraph 25 of the Johannesburg Declaration on Sustainable Development (Political Declaration), which read: "We reaffirm the vital role of indigenous peoples in sustainable development."

6. The United Nations Conference on Environment and Development, held in Rio de Janeiro in 1992, had provided the fundamental principles and the programme of action for achieving sustainable development. The countries taking part in the World Summit strongly reaffirmed their commitment to the Rio principles, and the full implementation of Agenda 21 and the Programme for the Further Implementation of Agenda 21. They also committed themselves to achieving the internationally agreed development goals, including those contained in the United Nations Millennium Declaration and the Millennium Development Goals and in the outcomes of the major United Nations conferences and international agreements since 1992, including the Johannesburg Plan of Implementation. The Johannesburg Plan of Implementation would further build on the achievements attained since the United Nations Conference on Environment and Development.

7. The commitments made in chapter 26 of Agenda 21, entitled "Recognizing and strengthening the role of indigenous people and their communities", as well as other Rio commitments are recognized. Paragraph 26.1 of Agenda 21 states: "In view of the interrelationship between the natural environment and its sustainable development and the cultural, social, economic and physical well-being of indigenous people, national and international efforts to implement environmentally sound and sustainable development should recognize, accommodate, promote and strengthen the role of indigenous people and their communities."

8. Indigenous peoples of the world assembled within the Khoi-San first tribal peoples' territories in Kimberly, South Africa, for the Indigenous Peoples' International Summit on Sustainable Development held from 19 to 23 August 2002, as a pre-summit to the Johannesburg World Summit. Three hundred indigenous representatives reaffirmed the Kari-Oca Declaration and the Indigenous Peoples' Earth Charter and further developed an Indigenous Peoples' Plan of Implementation on Sustainable Development and the Kimberly Declaration.

9. The Indigenous Peoples' Plan of Implementation on Sustainable Development addressed energy concerns in sections 44 to 48, set out below:

> 44. We call for the declaration of governmental moratoria on the following activities:
>
> a. The expansion of and new exploration for the extraction of oil, natural gas and uranium and coal mining within or near indigenous lands and territories, especially in pristine areas and environmentally, socially, culturally and historically sensitive areas.
>
> b. The construction of large dams. Governments and multilateral institutions should utilize the framework proposed by the World

Commission on Dams for an approach to development based on the recognition of rights and the assessment of risk.

c. New nuclear power plants. We call for a phase-out and decommission of all nuclear power plants.

d. The transportation and storage of radioactive waste on indigenous peoples' lands and territories. We firmly support the containment and monitoring of waste on-site for the duration of its radioactive life.

45. We will support and commit ourselves to promote the use of renewable energy sources to meet the energy needs of our peoples and communities. We will work towards the development of international mechanisms to support capacity-building, financial mechanisms and technology transfer for our communities to address renewable clean energy development to promote sustainable development initiatives that embrace traditional knowledge.

46. We will demand that, in addition to environmental impact assessments on energy-related activities, social, cultural and health impact assessments must be conducted, and we commit ourselves to participate actively in such impact assessments.

47. We will urge Governments to establish laws, rules and constitutional provisions that prohibit the confiscation of indigenous lands for development of energy-related activities.

48. We will identify government subsidies of unsustainable forms of energy and demand that such subsidies be phased out under a five-year time frame.

10. The Indigenous Peoples' Plan of Implementation on Sustainable Development addressed climate change concerns in sections 58 to 66, set out below:

58. We urge the United States of America and all other countries that have not done so to ratify and implement the Kyoto Protocol. We urge all countries to adopt equitable cross-sectoral strategies to halt the destruction of key carbon sequestration ecosystems.

59. We demand that the Kyoto Protocol raise the 5.2 per cent carbon dioxide reduction target and implement the recommendation from the Intergovernmental Panel on Climate Change that greenhouse gas emissions be immediately reduced by 60 per cent in order to stabilize global temperatures.

60. We renew our commitments to our practices and knowledge for minimizing the emission of greenhouse gases, and urge all countries to fulfil their commitments to reduce greenhouse gases emissions.

61. We oppose the implementation of carbon sinks and carbon-trading mechanisms in the Clean Development Mechanism of the Kyoto Protocol and the United Nations Framework Convention on Climate Change.

62. We urge States to promote equitable cross-sectoral socio-political processes, based on an ecoregion approach, for the economic mitigation of natural disasters caused by climate change.

63. We will give priority to our own scientific and technical initiatives based on our traditional practices, which generate knowledge on production systems that have a minimal greenhouse effect.

64. We demand that indigenous peoples be accorded special status in the United Nations Framework Convention on Climate Change process.

65. We demand the creation of an ad hoc open-ended intersessional working group on indigenous peoples and local communities and climate change with the objective of studying and proposing timely, effective and adequate solutions to respond to the emergency situations caused by climate change affecting indigenous peoples and local communities.

66. We call upon all Governments to implement climate impact assessments, which take into account indigenous knowledge systems and observations, as well as the full and equal participation of indigenous peoples in all aspects and stages of the assessment.

11. On matters related to climate change, a review was conducted of the following positions, statements and declarations of indigenous peoples who had assembled at meetings on climate change: Albuquerque Declaration, "Circles of Wisdom: Native Peoples/Native Homelands Climate Change Workshops", in preparation of the fourth session of the Conference of the Parties to the United Nations Framework Convention on Climate Change, Buenos Aires, November 1998; intervention of the representative of the Coordinator of the Indigenous Organizations of the Amazon Basin and the Climate Alliance, for the fourth session of the Conference of the Parties to the United Nations Framework Convention on Climate Change, Buenos Aires, November 1998; resolution of the indigenous organizations in the International Workshop on International Policies on Climate and Indigenous Peoples, Geneva 1999; Quito Declaration on Climate Change Negotiations, Quito, May 2000; Declaration of the First International Indigenous Peoples Forum on Climate Change, Lyon, France, September 2000; The Hague Declaration of the Second International Forum of Indigenous Peoples and Local Communities on Climate Change, for the sixth session of the Conference of the Parties to the United Nations Framework Convention on Climate Change, The Hague, November 2000; Bonn Declaration Third International Forum of Indigenous Peoples and Local Communities on Climate Change, for the second part of the sixth session of the Conference of the Parties to the United Nations Framework Convention on Climate Change, Bonn, Germany, July 2001; Indigenous Peoples and Local Communities Caucus statement, for the seventh session of the Conference of the Parties to the United Nations Framework Convention on Climate Change, Marrakech, Morocco, November 2001; International Indigenous Peoples Caucus statement, for the eighth session of the Conference of the Parties to the United Nations Framework Convention on Climate Change, New Delhi, October 2002; Bali Principles, for the fourth session of the Commission on Sustainable Development acting as the preparatory committee for the World Summit on Sustainable Development, Bali, Indonesia, June 2002; Kimberley Declaration and Indigenous Peoples, Plan of Implementation on Sustainable Development, for the World Summit on Sustainable Development, Johannesburg, South Africa, August 2002; Milan Declaration of the Sixth International Indigenous Peoples Forum on Climate Change, for the ninth session of the Conference of the Parties to the United Nations Framework Convention on Climate Change, Milan, Italy, November 2003; declaration of the

indigenous peoples attending the tenth session of the Conference of the Parties to the United Nations Framework Convention on Climate Change, Buenos Aires, December 2004; and Tiohtiá:ke Declaration, for the eleventh session of the Conference of the Parties to the United Nations Framework Convention on Climate Change, Montreal, Canada, November-December 2005.

12. The Indigenous Peoples' Plan of Implementation on Sustainable Development addressed matters concerning crosscutting issues, including issues linking the rights and self-determination of indigenous peoples and sustainable development.

II. Review of implementation: trends observed

13. Review and analysis of progress and lack thereof in the commitment to developing national, regional and international energy and industry development activities based upon the sustainability paradigm that recognizes the rights of indigenous peoples and indigenous statements and findings from developing and developed countries relating to the main thematic topics of energy and its relation to sustainable development, industrial development, air pollution/atmosphere and climate change reflect the following consistent concerns:

(a) Economic globalization; regional, bilateral and global trading mechanisms; and Western forms of development have not been sustainable within indigenous and local communities;

(b) The rights of indigenous peoples, and their rights to land and water, are closely related to energy, industrial development, and protection of air quality and climate change impacts. The majority of governmental policies of nation States either did not address protecting the rights of indigenous peoples, treaty territories, land, air and water, biodiversity, food, culture, and sacred sites, or were not effective in doing so;

(c) Indigenous peoples, from the North and the South, historically and currently are experiencing poverty, and economic dependency from federalism and industrial development, and are also experiencing the symptoms of colonization, malnourishment and hunger;

(d) Within indigenous territories, energy-related natural resource extraction and development activities have historically destroyed and currently threaten indigenous subsistence, the pastoral and livestock-dependent way of life, culture and traditional food systems;

(e) Historically, energy development activities in indigenous communities have been based upon Western values of utilizing monetary profit to raise gross domestic product (GDP) at the expense of the rights of indigenous peoples and the recognition of their basic human rights. Indigenous values teach that money cannot fully compensate for cultural losses, losses of traditional lands, debilitating illnesses, death, impure water, threats to long-term food security, or diminished economic autonomy;

(f) Governmental agencies and private sector corporations have not responded sufficiently or responsibly to the massive energy-related natural resource developments that impact indigenous and local communities with issues encompassing assessment, clean-up and mitigation of natural resource damages,

human health and ecosystem impacts, and other environmental problems arising on indigenous land;

(g) There are large hydro dams that flood the lands that sustain indigenous peoples' food security, disrupt and destroy subsistence-based cultural practices, and forcibly displace entire communities. There are currently 1,600 dams under construction in 42 countries worldwide. According to the World Bank, the construction of 300 large dams each year will mean the displacement of more than 4 million indigenous peoples from their territories. In India, where more than 600 out of a planned 1,600 dams are currently under construction, 40 per cent of the people displaced are Adivasis, or the first tribal indigenous peoples. Almost all the larger dam schemes built in and proposed for the Philippines are on the land of the country's 6.5 million indigenous People;

(h) Oil and gas operations have devastated dozens of indigenous communities around the world, resulting in the loss of population, territory, economic stability and collective identity. Now, with the current wave of hydrocarbon exploration under way, the oil industry is entering new frontiers and regions, which are home to a myriad of indigenous cultures. From the Amazon and Asia to the Arctic, these indigenous peoples' ways of life are built on age-old traditions and deep ties to and interdependence with the ecosystems in which they live. In many countries, militarization has accompanied dam-building;

(i) The burning of oil, gas and coal, known collectively as fossil fuels, is the primary source of human-induced climate change. Global warming poses significant threats to indigenous and local communities from the Arctic, Latin America, Africa, Asia and South-East Asia, the Pacific islands, Northern America and every other region of the world. Climate change, if not halted, will result in increased frequency and severity of storms, floods, droughts and water shortage. Globally, climate change is worsening desertification. It is polluting and drying up the subterranean water sources, and is causing the extinction of precious flora and fauna;

(j) Increased climate variability and extreme weather have affected hundreds of millions of people worldwide and disrupted economies. Climate change is inevitable and owing to the properties of water has consequences for many cross-cutting issues. The communities most vulnerable to climate change are indigenous peoples and impoverished local communities occupying marginal rural and urban environments. Small island communities are threatened with the prospect of becoming submerged by rising oceans. Many countries in Africa have been suffering from unprecedented droughts;

(k) The recent push for energy and water projects through the building of more large dams continues to threaten the security of many indigenous communities, while many others are demanding reparations for past wrongs. Large dams have disproportionately impacted indigenous peoples and future dam building also targets indigenous lands disproportionately. Major impacts include: loss of land and livelihood; undermining of the fabric of their societies; cultural loss; fragmentation of political institutions; breakdown of identity; and human rights abuse. As already noted, in many countries, militarization has accompanied dam-building;

(l) Energy-related and industrial developments within territories where indigenous peoples reside have been characterized by weak mechanisms for

community participation in the planning and decision-making process. These developments have not included a clear-cut process for implementing mechanisms for prior and informed consent of indigenous peoples;

(m) The integration of the rights of indigenous peoples within the process of the fulfilment of the right to development is fundamental to any form of just and sustainable development. A critical first step is to include the commitment to indigenous rights in strategies for achieving the commitments under the Johannesburg Plan of Implementation, Agenda 21 and the Millennium Development Goals.

III. Energy for sustainable development

14. It is recognized that more than 2 billion people in developing countries, and some populations in developed countries, lack modern energy services. Many of these are rural poor and indigenous peoples who have no access to electricity. The lack of data on the proportion of indigenous peoples worldwide who do not have access to electricity is a serious problem.

15. Within developing countries, many of the rural populations, which include indigenous peoples and local communities of land-based cultures, use traditional fuels, such as wood, charcoal and dung for cooking.

16. Within developed countries, there are indigenous peoples within rural areas, many of whom are experiencing poverty, who, similarly, use traditional fuels such as wood and charcoal to supplement modern energy systems for cooking and heating.

17. Within both developing and developed countries, there are indigenous peoples who do not have access to affordable and sustainable energy services. This is a particularly difficult problem in rural areas, where conventional technologies, such as grid-connected electricity, are not available, or are expensive or impractical.

18. In almost every region of the world where indigenous peoples reside, their homelands are rich in the natural resources that the energy sector depends on for creating energy and electricity and for providing fuel for transportation and other services. These include large dams; uranium for nuclear power; oil, gas and coal-bed methane; coal for power plants; and large-scale geothermal energies from volcanoes and geysers.

19. One of the main problems noted, although there have been exceptions, was that, globally, much of the energy development in many regions was carried out on the land of indigenous peoples and used their natural resources without their prior consent and without them receiving any tangible benefits or energy services from energy-related development.

IV. Climate change

20. Climate change impacts can sabotage the efforts to achieve the goals of sustainable development and, in particular augments poverty in developing countries, especially the least developed countries and the small island developing States. Furthermore, industrial production and energy consumption patterns have

various impacts on the climate system. Owing to these impacts, climate change must be considered in the broader context including indigenous peoples and sustainable development and there is a need to ensure that climate policies are integrated into national development planning and national sustainable development strategies.

21. The indigenous statements and declarations listed in paragraph 11 above express the concerns of indigenous peoples, from every region regarding the crisis being compounded by climate change and global warming and the disproportionate and disruptive effect of climate change on the culture, property, residence, health, food security and livelihood of indigenous peoples and local communities.

22. It was alarming to hear reports at the recent eleventh session of the Conference of the Parties to the United Nations Framework Convention on Climate Change that many countries that had made commitments to reducing carbon dioxide ("carbon") emissions under the Kyoto Protocol might not be able to fulfil those commitments. Commitments under the Kyoto Protocol end in 2012.

23. At the eleventh session, countries made a commitment to entering into negotiations for the next round of carbon dioxide reductions, after 2012, in an attempt to keep the rise in temperatures below 2 degrees Celsius over pre-industrial levels, a key tipping point for the world's ecosystems.

24. Projected impacts are staggering. If the global average temperatures rises at least 2 degrees Celsius above pre-industrial levels, tens of millions of additional people worldwide are projected to be at risk from coastal flooding and hunger, hundreds of millions from malaria, and billions from water shortage. Up to one third of land-based species would be doomed to extinction by 2050 under mid-range warming scenarios. Climate change is already threatening the cultural survival of indigenous communities in the Arctic region.

25. Many countries are now beginning to understand the need to negotiate much deeper reductions in carbon and the broader greenhouse gas emissions that extend beyond the provisions of the Kyoto Protocol. However, many Governments, petroleum companies and international financial institutions are not halting the extraction of fossil fuels, the main source of greenhouse gases.

26. The adverse impacts of climate change will fall most heavily on the poor, mostly in developing countries, and indigenous peoples in developed and developing countries, since they have the least capacity to adapt owing to limited technical and financial resources.

27. The funding of adaptation is especially critical in regions or areas in which indigenous peoples and rural land-based cultures live, such as — but not limited to — Africa, small island States, India and the Arctic regions.

V. Identification of obstacles/constraints experienced in advancing implementation

A. Energy for sustainable development

28. Indigenous peoples and organizations within developed and developing countries report that energy development activities within their lands continue to focus primarily on non-renewable resources. They do not see energy paradigms

shifting towards alternative energy technologies that are cleaner and more efficient. Energy development must have positive impacts on poverty eradication and the improvement of the standards of living of indigenous peoples. There exist the following constraints.

29. Vulnerabilities to collusion of governmental decision makers with industry and commerce which prevents the diversifying of energy production and the supply of renewable, cleaner and more efficient technologies; and trust issues among local communities, the private sector and government.

30. Interference of financial mechanisms such as regional and international financial institutions and World Trade Organization commitments that still prioritize a dependency on fossil fuels, mining and non-renewable technologies.

31. Lack of teeth in human rights law and treaties compared with trade and commercial treaties, especially, within the Economic and Social Council in respect of cultural rights, conventions, treaties and human rights mechanisms.

32. Poor domestic legislation on environmental and human rights protection and low prioritization of such protection compared with revenue-generation and finance.

33. Misidentification of industrial development/capital-generation/market access as constituting human development despite evidence of growing and widening poverty.

34. Lack of transparency in the planning process by developed and developing countries and lack of mechanisms that would assure prior and informed consent of indigenous communities.

35. Lack of recognition and protection of, and respect for, indigenous peoples' unqualified right to self-determination.

B. Climate change

36. Indigenous peoples from developing and developed countries have identified obstacles to their full and effective participation in all levels of discussion, decision-making and implementation of mechanisms to address climate change, including disparities and vulnerability in terms of impact, mitigation, adaptation, poverty, social and cultural impact, and other climate change-related issues.

37. A need recognized by indigenous peoples related to issues of adaptation to climate changes was that for the creation and adequate financing of the Adaptation Fund, to be accessed by them for the purpose of addressing the potential and actual impacts of climate change in a manner compatible with their traditional knowledge systems, customs, culture, lifestyles and aspirations.

38. Indigenous peoples have expressed consistently within the sessions of the Conference of the Parties to the United Nations Framework Convention on Climate Change the need for "Indigenous peoples and climate change" to be a permanent item in the agenda of the sessions of the Conference of the Parties to the United Nations Framework Convention on Climate Change/Meetings of the Parties to the Kyoto Protocol, and of the meeting of the subsidiary bodies, including the establishing of in-session workshops, and meetings of indigenous experts. The fact that this has not been a permanent item in the agenda of the sessions of the

Conference of the Parties to the United Nations Framework Convention on Climate Change or of the Meetings of the Parties to the Kyoto Protocol has been a constraint for indigenous peoples. Participation of indigenous peoples would allow them to make specific references to disparities, successes and impacts in respect of the implementation of modalities, procedures and mechanisms for the evaluation and assessment of the Kyoto Protocol and its Clean Development Mechanism and Joint Implementation initiatives. Indigenous experts should be consistently involved in the monitoring, evaluation and impact assessment of all interventions in or affecting indigenous territories.

39. In reviewing other obstacles related to global mechanisms to reduce greenhouse gases, indigenous peoples expressed concerns that the modalities and procedures for activities under the Clean Development Mechanisms have not respected and guaranteed their right to lands, territories and self-determination. Many indigenous peoples organizations have expressed concerns that the Clean Development Mechanisms and sinks projects do not contribute to climate change mitigation and sustainable development.

40. Indigenous peoples in the global South have not been included to a sufficient degree in the design and implementation of the Clean Development Mechanisms and sinks projects.

41. Solutions to the climate change problem must emphasize real, verifiable reductions in fossil fuel emissions. There are reports that carbon reductions claimed through the Clean Development Mechanisms are not real and that they rely upon hypothetical baselines that can be manipulated to produce credits for imaginary reductions. Clean Development Mechanisms projects routinely fail to demonstrate that they are not giving credit to projects that would have occurred anyway; and there is no methodology that can truly show that the projects are additional. The Clean Development Mechanisms has no way of ensuring that reductions at one location are not undermined by carbon emissions produced at another location. Despite testimonies from promoters of the Clean Development Mechanisms, indigenous peoples are concerned that these problems have not been overcome, and the evidence shows that they never will be.

42. Sinks are particularly troubling to indigenous peoples, especially from the global South. Confusing fossil carbon with biological carbon results in sinks being phantom reductions which do not actually address the problem of climate change.

43. Clean Development Mechanisms shifts the responsibility for acting from those who have contributed most to the climate problem to those who have contributed least. This creates inequity between the industrialized countries of the North and the developing countries in the South. Under the Clean Development Mechanisms, the planting of timber plantations, for example, is being undertaken under the pretence of fostering sustainable development. These projects are neither "clean" nor "sustainable" nor are they a means of "development": they have a documented negative impact on indigenous and local communities in the global South. This applies not only to Clean Development Mechanisms sinks projects, but also to most other Clean Development Mechanisms projects.

44. Within the domestic, regional and international climate change negotiations, indigenous peoples have indicated the lack of and need for special capacity-building initiatives that are undertaken for indigenous peoples. Such capacity-building would

strengthen their participation in climate change negotiations and ensure that the necessary funding was provided to guarantee such participation and strengthen their capacities.

45. Indigenous peoples see a need for their participation within climate impact assessments that would take into account indigenous knowledge systems, culture, social values, spirituality and ecosystems, as well as for the full and equal participation of indigenous peoples in all aspects and stages of assessments focusing on biological regions that impact the livelihood of indigenous peoples.

VI. Lessons learned and new opportunities to expedite implementation

46. Any dialogue or partnership with indigenous peoples on issues of energy and sustainable development, industrial development, air and atmosphere pollution and climate change must be based on recognition and protection of, and respect for, the fundamental principles of indigenous peoples' unqualified right to self-determination, which is the basic precondition for guaranteeing their ownership, permanent sovereignty, control and management of their lands, territories and natural resources.

47. Governments must establish specific legal frameworks, recognizing indigenous peoples' rights to self-determination and development and their land tenure systems and customary laws.

48. It is recognized that many countries have achieved constitutional, legal and institutional reforms that are reshaping the traditional relationship between indigenous communities and the nation State. These government actions must be further identified, and case studies must be prepared and made available to other countries that are struggling with the challenge of developing a better relationship with indigenous peoples. The constitutions of Bolivia, Ecuador, Mexico and Paraguay, for example, now recognize the multicultural character of States and the existence within them of indigenous peoples as constituting unique communities with specific rights and distinct cultures and languages.

49. Government policies based on assimilation and paternalism must change and new approaches must be found based on participation and consensus-building and a respect for the aspirations of indigenous peoples.

50. Sustainable development must be based on indigenous peoples' own identity. In this view, the start-up capital for development comprises the cultural and social assets of indigenous peoples, with their utilization to be catalysed by the addition of new mechanisms and resources.

51. The right to development is guaranteed to indigenous peoples in the Declaration on the Right to Development (adopted by the General Assembly in its resolution 41/128 of 4 December 1986), which was used as much of the basis for this discussion. Article 1 of the Declaration states that:

(a) The right to development is an inalienable human right by virtue of which every human person and all people are entitled to participate in, contribute to, and enjoy economic, social, cultural and political development, in which all human rights and fundamental freedoms can be fully realized;

(b) The human right to development also implies the full realization of the right of peoples' self-determination, which includes, subject to relevant provisions of both International Covenants on Human Rights, the exercise of their inalienable right to full sovereignty over all their natural wealth and resources.

There is a need:

52. For transparency and partnership.

53. For the proper regulation and implementation of domestic and international law on environment and social protection including human rights mechanisms.

54. For the recognition of groups of rights-holders, indigenous peoples and individuals with the teeth required to achieve enforcement on the domestic and international levels.

55. For the scrutiny and modification of trade and market regimes in terms of the value of human rights and social, cultural and environmental factors.

56. That industrialized countries have an addiction to the high consumption of energy is the general observation of many indigenous organizations worldwide. The Earth and its natural resources cannot sustain the consumption and production needs of this modern industrialized society. Agenda 21 highlights the fact that current levels of energy consumption and production are not sustainable, especially if demand continues to increase and stresses the importance of using energy resources in a way that is consistent with the aims of protecting human health, the atmosphere and the natural environment.

57. Developed and developing countries must accelerate the development, dissemination and deployment of affordable and cleaner energy efficiency and energy conservation technologies.

58. Lessons being learned are that countries that depend on fossil fuels for energy must take action to: reduce their dependence on a fossil fuel economy, phase out subsidies in this area that inhibit sustainable development, obtain support for the transition to a low carbon economy, and implement programmes for energy efficiency, and conservation and initiatives to address consumption issues.

59. New opportunities are emerging where by indigenous peoples within developing and developed countries possess land for wind, marine (wave/tidal), solar thermal and solar photovoltaic energy development. Indigenous peoples are promoting the use of renewable energy sources to meet the energy needs of their local communities, as well as exploring the potential to provide energy to the utility grid of the country. Indigenous peoples must have the support of international mechanisms for capacity-building, and of financial mechanisms and technology transfer in order for their communities to address renewable clean energy development and promote sustainable development initiatives that embrace traditional knowledge.

60. Renewable energy may be particularly appropriate for developing countries in rural areas, particularly remote locations where indigenous communities are located. Transmission and distribution of energy generated from fossil fuels can be difficult and expensive. Producing renewable energy locally can offer a viable alternative.

61. Access to renewable energy will not alleviate poverty unless it is seen as a development-related issue rather than as an energy-related one. Communities will not automatically gain income benefit from renewable energies.

62. To achieve economic development, renewable energy needs to be linked with, or to be part of, another project that improves community development, such as a solar-powered fish dryer, or a coconut dryer for making soap. Communities also need entrepreneurial skills in order to benefit fully from the economic opportunities provided by these projects. However, in situations where a community has a viable lifestyle that does not involve cash, renewable energy becomes a social issue, not one of economic development.

63. Lessons learned have demonstrated the need for the planning process to encompass an understanding of the economic and cultural needs of the target community. Renewable energy will be of interest to communities only if it can meet their needs. The needs of all the stakeholders in the community must be considered. The involvement of women and young people is critical to the development of an energy policy. In many indigenous communities, it is women who often have the most deeply thought-out views on energy needs and uses.

64. Technology transfer at the community level is important for sustainability, as it provides technicians trained locally to maintain and service equipment. Past experience suggests that taking training to the indigenous community is more effective than bringing people to the city for training.

65. Lessons learned on sustainable development models including intergovernmental bodies, countries and indigenous peoples are offered by the Arctic Council, which incorporates principles of genuine partnership between States and indigenous peoples, ecosystem approaches, collaboration between bearers of both traditional and scientific knowledge, and local, national and regional implementation plans.

66. New opportunities for addressing unsustainable hydro dam developments could entail calling upon Governments, international financial institutions, bilateral donors and the private sector to cease promoting large water dam projects by incorporating the recommendations of the World Commission on Dams into domestic energy planning processes, including reparations. This would include the core values of the Commission report, its strategic priorities, its "rights and risks framework" and the use of multicriteria assessment tools for strategic options assessment and project selection. Its rights-based development framework, including the recognition of the rights of indigenous peoples in water development, is a major contribution to decision-making frameworks for sustainable development.

67. Any climate change solution cannot and should not be separated from issues of social and environmental justice.

68. Sinks credits are unverifiable and ineffective and should not be included in policies addressing the climate change problem.

69. Polluters must pay. Those most responsible for causing the climate change problem — the global North — must fund solutions to the problem, and must do so in proportion to its responsibility and its capacity to pay. Climate change policies should not provide windfall profits to those corporations that have produced the climate problem. Emissions credits or allowances should not be given away for free.

70. A "just transition" must create opportunities for local and indigenous peoples' communities, displaced workers and all affected communities to participate in a low-carbon economy. Vulnerable communities and workers must be protected from the impacts of climate change and climate change policies, and supported in local struggles against the fossil fuel economy and in efforts to mitigate and adapt to climate change. These efforts must receive economic and political support.

71. Indigenous and local communities have significant contributions to make in policy development and implementation of solutions to the energy and climate change problem. Mechanisms for community oversight must be included. Indigenous peoples and local communities are not only victims: they are also producers of solutions.

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Addendum

Contribution by non-governmental organizations**

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I. Energy for sustainable development

Trends: a deepening energy crisis

1. Despite billions of dollars invested, most energy projects are not supportive of sustainable development. Some 2.4 billion people in developing countries lack modern fuels, 1.6 billion do not have access to electricity. Four energy crises are highlighted in *Our Common Future*,[1] which have deepened.

2. First, despite rapid advances in science and technology, inequality and poverty are on the increase, aggravated by a rapidly urbanizing world. Development and environmental policies also often lead to disproportionate burdens on the poor, discriminate against minorities and violate human rights obligations.

3. Second, economic growth exacerbates resource depletion and environmental degradation, especially in countries where regulatory frameworks and legal constraints are weak or non-existent. In the past 10 years, the gap between the rich and the poor has increased within and between countries. In many countries, the middle class, traditionally a factor in maintaining socio-economic stability, is shrinking dangerously, adding to social unrest.

4. Third, the ecological crisis is deepening. We continue to face soil erosion, shrinking water supplies, water degradation, air pollution, climatic changes, increasing nuclear hazards, deforestation, biodiversity loss and species extinction. Scores of international environmental agreements to protect the environment and natural resources have been ratified, but there is open violation since enforcement and monitoring are weak.

5. Fourth, current patterns of development and energy policies mean we are borrowing from the future and thereby handicapping future generations. These four crises are interlinked and compound each other. The turn of the century has also witnessed the end of cheap energy and brought home the stark reality of dwindling oil and gas reserves. Thus, solutions to the energy crisis are urgently needed; they have to be cross-cutting and must be applied simultaneously.

Challenges: coherent integration and implementation

6. For energy policies to contribute to sustainable development, they must take into consideration all four interrelated areas: economy, science and technology, environment and equity. A number of principles, to which Governments have already committed, must guide decisions regarding new energy investments. These include the polluter-pays principle[2] and the precautionary principle.[3]

7. Only forms of energy that can be integrated into a closed life cycle and do not create externalities, i.e., non-recyclable wastes of any kind, can be considered sustainable over the long term. From an energy perspective, that would include mainly the use of renewable energy and improvements in energy efficiency.

8. The current ideology of developing "heavy", centralized power plants, with huge volumes of emissions under the pretext of economically sound development, is now increasingly hindering sustainable development. Elimination of fossil fuels subsidies, internalization of environmental costs, increased energy efficiency and better knowledge of renewable energy can make energy systems more sustainable.

9. Improved energy efficiency will reduce the use of other natural resources, leading to dematerialization of the economy and restructuring of production processes. Even though the world will remain dependent on fossil fuels for a few decades to come, in most sectors a factor 4-10 increase in energy efficiency is both possible and desirable in a medium-term development scenario.

10. The global economy is not developed according to principles of sustainability, which makes developing sustainable energy increasingly difficult. The following economic developments have exacerbated difficulties:

(a) Globalization, calling for deregulation, rapid liberalization and privatization, impedes access to safe, affordable energy by the poorest of the poor. Cheap energy distributed globally by multinational oil companies helps make the transportation of foreign goods cheaper than local products, undermining the economic, sociocultural and natural fabric of community life;

(b) Privatization of major energy assets, such as dams and big electric power plants, transfers, often at a loss to public authorities, to the private sector investments that have been paid for by the citizens, at the expense of job stability, security and environmental protection;

(c) Economic liberalization makes regulation a despised mode of control of the economy. But current approaches offer little protection against threats, impacting both the environment and quality of life, and threaten human rights. As always, the market system benefits only those with purchasing power.

Actions taken to address the energy challenge

11. Since the energy crises of 1973 and 1979, voluminous research and a host of international conference proposals and solutions within the United Nations and through collaborative efforts by Governments, non-governmental organizations (NGOs) and business have provided frameworks to guide the world community in tackling the energy challenge.

12. All those initiatives show an encouraging level of convergence. They challenge the supremacy of "heavy" polluting energy sources and centralized power generation. They call for the elimination of fossil fuel subsidies, the internalization of environmental costs, increased energy efficiency and better knowledge of renewable energy.

13. In addition, citizens and local authorities both in industrialized and developing countries are mobilizing to effect change, stressing the need for capacity- and institution-building and for creative changes such as the establishment of citizens' utility boards. They insist that energy policy be environmentally driven and that the energy sector be planned and managed for sustainable development. Energy technicians are developing new methodologies and new tools[4] for sustainable energy.

Energy sustainability

14. For energy strategies to be conducive to sustainable development, energy sustainability must first be defined, then measured and monitored. Energy sustainability must be:

(a) Consistent with environmental sustainability. Pollutants related to energy should not exceed the absorptive capacity of the environment (air, water, land), as verified by scientific standards and underpinned by the precautionary principle. Environmental costs for maintaining the full functions of the relevant energy resource or the functions of other natural assets affected by the development and use of energy should be accounted for, collected from the producers and users utilizing the polluter-pays principle and reinvested within the environmental sector. Use of nuclear power, with numerous risks during the fuel-cycle, including the risk of spreading materials for nuclear weapons, as well as unresolved waste problems, is an unsustainable solution to global energy demands;

(b) Consistent with economic sustainability. All foreseeable costs of energy, including externalities, must be accounted for in order to determine the feasibility of projects. If projects are implemented, such amounts must be collected and either used to compensate the losers or invested by or through the public sector in an asset (particularly renewable energy systems) or in a combination of assets that lead to a constant level of income similar to that which originated from the relevant energy resource;

(c) Consistent with social sustainability and human rights. Energy policy should contribute to poverty alleviation and social equity. The development and use of energy should not harm people's health (see the international standards of the World Health Organization (WHO)), involve the loss of jobs or forced resettlements, or violate other established human rights principles, including the right to food and clean water. Where human impacts do occur, health impacts can and should be included in the cost of energy development and use, and reallocated to human health protection;

(d) Consistent with technological sustainability. All countries will be more sustainable technologically if there is a good choice of energy technologies, if they are locally available and if they can increase the level of local technological expertise and innovation, which in turn can lead to the transformation of local raw materials into exportable finished goods. Developing countries can avoid the pollution of industrialization by leapfrogging obsolete technologies.

15. Making the environmental, economic, technological and social implications, and their impact on policymaking, transparent to civil society is important. Trade-offs should be determined through a multi-stakeholder process involving all interested and affected parties. Costing for different purposes (environmental, economic and social) can be used as an instrument to identify effects of energy developments and facilitate discussions. However, final decision should not be based solely on monetary valuation. In assessing non-quantifiable impacts, various well-known qualitative approaches and techniques can be used to take non-monetary impacts and externalities into account. Such action may help in the application of principles contained in legal instruments like the Aarhus Convention. Sustainability has also to be monitored and measured continually, addressing the whole energy life cycle.[5]

Energy challenges for the Commission on Sustainable Development review session

16. Civil society and Governments can use energy as a tool to solve crises threatening to destroy ecosystems on which humanity depends. Using the

opportunities provided by the Commission on Sustainable Development (CSD) review session, the following possibilities should be explored:

(a) Developed countries setting an example for all countries on how to implement sustainable energy policies, including through showcasing how to integrate sustainable energy policies into all other sectoral policies;

(b) Developed countries taking the lead in using safe and clean energy strategies, promoting energy-saving measures, changing unsustainable patterns of consumption and production relating to energy and developing and ensuring the sustainable use of renewable energy technologies in a determined and concerted way, within the current decade, using targets and timetables;

(c) Developed countries improving and accelerating the transfer of appropriate, clean energy technologies to developing countries via partnerships, while respecting local needs and priorities, and developing policies based on a phase out of environmentally harmful subsidies (perverse subsidies) and consistent promotion of energy conservation and renewable energy;

(d) All countries respecting their international commitments and working together towards achieving ambitious quantified pollution reduction targets, in particular to compensate for climate destabilization;

(e) All countries empowering themselves with adequate capacity and democratic institutions to plan, finance, manage and monitor their energy systems, making sure they are conducive to sustainable development, and developing trans-disciplinary scientific cooperation that is responsive to social demands, using research institutes and NGOs to influence production and consumption practices;

(f) All countries engaging in the fight against energy deprivation, favouring South-South-North cooperation, i.e., allowing least developed countries to first select an energy strategy permitting them to implement their sustainable development plan and strategies using the cleanest energy possible and leapfrogging over obsolete technologies;

(g) International organizations consistently supporting within their work programmes countries' transition to sustainable energy systems. Unsustainable forms of energy, such as nuclear power and large hydropower schemes, should not be supported and energy lending should be shifted towards sustainable energy solutions. Governments and international organizations should establish the institutional basis for promoting renewable energies at the international level.

II. Industrial development

Trends

17. Since its inception, the CSD process has explicitly recognized that sustainable industrial policy is at the heart of development strategies, encompassing a variety of interrelated social, economic and environmental objectives. At the sixth session of the CSD, the report of the Secretary-General highlighted that: "policy reforms for sustainable growth are necessary to provide the framework within which industrial development can take place in a manner that is conducive to both social development and environmental protection".[6]

18. The fundamental issue remains how to pursue responsible industrial growth without compromising on sustainability.[7] Achieving sustainable development is about improving quality of life for all, especially vulnerable populations — the poor, women, the elderly and children.

19. There remains within the sustainability discourse a bias towards taking the traditional economic model of exponential industrial development as a starting point, even though technological processes alone have not managed to make sustainability a reality in developed industrial economy countries.

20. The essence of sustainability is to decouple material progress from harmful impacts on society and the environment by putting the three elements of sustainable development on complementary and, hopefully, mutually reinforcing tracks.[8]

21. Taking into account the context of international commitments to sustainability, sustainable industrial development is essentially about achieving sustainable consumption and production.

Challenges

22. The unique position of developing countries is posing challenges to achieving sustainable industrial development. Many actors, particularly in the industry and government sectors, continue to believe that sustainability concerns come second to achieving priorities in industrialization, employment creation and poverty reduction in developing countries. Other experts suggest that difficulties faced by developing countries in obtaining the necessary technology or management techniques make it challenging for them to manage the risks of inevitable industrialization.[9]

23. Despite the existence of policy frameworks encouraging sustainable growth, industrial development is not taking place in a manner that is conducive to either social development or environmental protection. This points to major challenges in making sustainable consumption and production a reality.

Limited follow-up

24. Research done by NGOs has shown a lack of follow-up on international commitments relevant to sustainable consumption and production.[10] Global surveys have found slow progress in most areas. For example, 40 per cent of Governments surveyed were not even aware of the United Nations guidelines for consumer protection. Of 52 Governments that responded (150 Governments approved the guidelines in 1999), only 56 per cent promote research on sustainable consumption, and the same percentage use relevant economic instruments such as green taxes; only 54 per cent of the respondents measured the progress of their nations towards more sustainable consumption patterns.

25. Such findings illustrate the slow progress being made in international commitments to implement sustainable consumption and production. The global dialogue on sustainable consumption and production generated by the Marrakech Process[11] is regarded by many as a success in following through on our international commitments; this process has not yet initiated reliable targets to measure whether real progress is being made on the ground.

Limited integration across global commitments

26. Another persistent challenge to the concrete implementation of sustainable consumption and production is the lack of clarity on how the sustainable consumption and production agenda connects to the traditional development agenda. The Second International Expert Meeting on the 10-Year Framework of Programmes for Sustainable Consumption and Production (Costa Rica, September 2005), emphasized the importance of linking work on sustainable consumption and production to poverty reduction and the attainment of the Millennium Development Goals, and that sustainable consumption and production policies should be integrated into national sustainable development strategies, including poverty reduction strategies where applicable.

27. Despite such assertions, information and guidance on how all actors, particularly industry, are meant to reconcile these various global commitments is still an area that needs to be addressed. All in all, the sheer volume of global commitments on issues that straddle the discourse on sustainable development is daunting, and there is a pressing need for clarity on which targets to pursue, how these targets relate to each other, etc. Talk must now be turned into action.

Skewed focus on sustainable production

28. Industry has devoted a greater focus on sustainable production, without enough emphasis on the demand/consumption side of the equation. Many people might feel that this is a natural focus, given that industry is essentially a "producer", not a consumer of goods and services. However, the NGO sector strongly asserts such a perspective turns a blind eye to the impact of production processes in the use and disposal phases and furthermore that industry is in itself a major consumer of raw resources. More needs to be done by industry to actively support sustainable consumption. Increasing the efficiency of production processes is not enough.

29. This claim has been consistently supported by studies undertaken by the World Resources Institute (2000),[12] the Economic Commission for Europe (ECE, 2001)[13] and the Organization for Economic Cooperation and Development (2002).[14] These show that consumption has proceeded at a much faster pace than that with which resource efficiency and technological advances in cleaning up production have been achieved. In particular, the resource efficiency gains brought about by the rise of e-commerce and the shift from heavy industries towards knowledge- and service-based industries have been more than offset by the scale of economic growth and consumer choices that favour energy- and material-intensive lifestyles.[15] As such, the expectation that the problem of overconsumption would be addressed if eco-efficiencies are attained with the production sphere has not been realized.[16]

30. Thus the recommendations from the last expert meeting on sustainable consumption and production, held in Costa Rica, to use existing networks like national cleaner production centres as vehicles to mainstream sustainable consumption and production are encouraging. Just as national cleaner production centres engaged specialized expertise, technology and resources to mainstream sustainable production, likewise similar resources must be expended in order to sensitize business and industry on the consumption side.[17]

Actions taken on sustainable industrial development

31. The Plan of Implementation of the World Summit on Sustainable Development (Johannesburg Plan of Implementation), chapter III, committed all actors in 2002 to:

> "accelerate the shift towards sustainable consumption and production to promote social and economic development within the carrying capacity of ecosystems by addressing and, where appropriate, delinking economic growth and environmental degradation through improving efficiency and sustainability in the use of resources and production processes and reducing resource degradation, pollution and waste".

32. In this respect, the Johannesburg Plan of Implementation has been unequivocally clear that industrial development has a role to play in promoting sustainable development. In doing so, industrial development can contribute to poverty eradication, creating employment and integrating women into the development process.

33. Building on previous frameworks, such as Agenda 21 and the 10-Year Framework of Programmes for Sustainable Consumption and Production, which was mandated by the Johannesburg Plan of Implementation, addresses how we are to meet the challenges of sustainable development with usable tools and policies. Along with practical guides such as United Nations guidelines for consumer protection (section G on sustainable consumption), it is clear that, as an international community, we have the necessary commitments and know-how to achieve sustainable development. The NGO community is convinced, however, that what is missing is the concrete political will and predictable and adequate resources to make things happen.

34. Examples from real life highlight the difficulties in this area:

(a) One encouraging example is the United Nations Environment Programme-led sustainable consumption Asia project, including least developed countries and six European countries, in a multi-stakeholder process. The resulting manual *Advancing Sustainable Consumption in Asia* clearly points out how sustainable consumption policies contribute to achieving poverty alleviation goals in the region;

(b) There is also a similar example, well documented by Consumentenbond, the Dutch consumer organization,[18] which has 650,000 members, which conducted a few years back research on corporate social responsibility aspects of production in four product areas: chicken and pork, clothes, wooden floors and mobile telephones.[19]

The burden of achieving sustainable industrial development

35. Relying on technological solutions alone cannot be the sole approach to ensuring sustainable industrial development in developing countries. In particular, overconsumption by affluent consumers and producers in these countries and the significant impact on social and environmental crises needs to be noted.

36. Communicating on the viability of existing sustainable systems from the South, as well as South-South exchanges on sustainable consumption and production, will be crucial to mainstreaming sustainability as a global phenomenon, rather than one framed and driven by economically advanced countries. This will involve discussion on the nature and types of foreign direct investment and overseas

development assistance as well. Linking this debate to ongoing discussions in the World Trade Organization, particularly the non-agricultural market access negotiations, the services negotiation, and the contentious bilateral and regional free trade agreements that are exacting World Trade Organization-plus commitments from Member States, will be imperative. Trade issues have the potential to undermine development in developing countries, including sustainable development.

37. The NGO sector would like to stress that discussing whether it is increased consumption that feeds production or increased production that raises consumption levels is purely academic. The NGO sector further stresses, "the reality is that in the consumption chain (whether this consumption is by producers or consumers) both patterns and levels of consumption need to be addressed at the same time".[20]

38. Specifically, supply and demand are both part of a single system, rather than separate and distinct processes. The challenge therefore is how to address sustainability through the entire consumption chain, from producers to consumers. In doing so, the need to address reduction in consumption by societies that are contributing to the ill effects associated with consumption is not a radical proposition, and arguably not a new concept in modern societies.

39. Though it may seem like an end-of-pipe solution, in fact, we are addressing a problem at its source.[21] Cleaning up production has to outpace consumption or keep pace with it in order for sustainable consumption to become a reality. The issue of reduced consumption levels has also to be addressed both by developed countries and the affluent elements of developing countries. Ultimately, the burden of achieving sustainable industrial development should be distributed appropriately among key actors.

Challenges for the Commission on Sustainable Development review session

40. The NGO sector suggests that governments and industry are the key drivers of sustainable industrial development. The following are a few specific recommendations for each sector to be pursued during the CSD review session.

Governments

41. It is not always necessary to invent new policy. There needs to be better implementation of existing policies. Key issues include:

(a) Ensuring coherence between international commitments such as the Millennium Development Goals, the United Nations guidelines for consumer protection, Agenda 21 and the Johannesburg Plan of Implementation;

(b) Taking a stakeholder approach, as advocated in CSD processes;

(c) Establishing laws and policies to ensure government and industry compliance with and implementation of human rights standards, including stakeholder participation and transparency;

(d) Showing transparency, introducing "right to know" principles, such as that following the Aarhus Convention on environmental information;

(e) Recognizing government as the key driver for sustainable consumption and production policies and exercising leadership, for example, by ensuring sustainable procurement policies, enforcing regulations and using economic and social instruments for sustainable development;

(f) Minimizing resource utilization: for example, through greater efficiency in the use of energy and resources, minimizing waste generation, sound pricing and phasing out environmentally harmful subsidies;

(g) Developing smart communication strategies and promoting actionable information through education and information programmes on impacts of consumer choices and behaviour, efficient use of materials and recycling.

Business and industry

42. Key issues include:

(a) Investing in "responsible" products and services;

(b) Reducing costs through waste reduction, energy efficiency, renewable energy, pollution prevention and resource productivity (including human productivity);

(c) Encouraging business innovation to make responsible consumption a real choice for consumers, including principles like asset retention;

(d) Providing reliable product information at the point of purchase. About 80 per cent of purchasing decisions are made in stores against a background of information given in the store itself;

(e) Being transparent above and beyond global minimum standards;

(f) Promoting common information such as labelling standards based on Life Cycle Analysis, and controlled by an independent third party;

(g) Increasing the availability of more detailed, smart information tools so that all consumers can reap educational benefits of new technologies; for instance, using informational bar codes and the Internet. By the end of 2005, the Asia-Pacific region will have more Internet users than the United States: a total of 192 million users, up from 55 million in 2000, representing an increase of 105 per cent;[22]

(h) Ensuring corporate responsibility by supporting "right to know" legislation at the national level and ensuring effective public participation in decision-making processes;

(i) Ensuring that policies and practices comply and/or do not affect human rights.

The NGO community

43. While business and governments should take the lead in implementing sustainable consumption and production, the wider NGO community will continue to have a key role to play as well. We must act in:

(a) Representing the social and environmental interests of consumers in all relevant national and international forums;

(b) Undertaking appropriate political or economic action in support of sustainable consumption and production;

(c) Negotiating with governments, manufacturers and others to ensure that products and services are socially and environmentally sound. Such advocacy should take place regardless of whether the products are domestically made or imported;

(d) Educating consumers on sustainable consumption, aiming to change attitudes and behaviour towards more sustainable product selections and lifestyle choices; raising consumer awareness of production and marketing practices that promote expectations and lifestyles not consistent with sound environmental policies;

(e) Providing information to consumers on products and services, including regular and thorough environmental and social impact assessments of products and services in comparative testing and surveys, and demanding that manufacturers and suppliers provide this so consumers can make environmentally informed choices;

(f) Highlighting outstanding examples of sustainable consumption and production;

(g) Developing visions for changes to sustainable patterns that combine the three pillars of sustainability.

44. The future of industrial development lies in its ability to meet the challenges of sustainability. Overcoming these challenges requires strong political will to meet global commitments, a meaningful consideration of the unique needs and aspirations of developing countries and ensuring that these commitments are complementary and do not drain valuable resources through duplication. Consequently, to arrive at a common vision of sustainable development, an alliance must be forged between all segments of society.

III. Air pollution/atmosphere

Trends

45. The scale and speed of global industrialization, stimulated by globalization and accelerated by trade liberalization, has led to unabated urbanization and motorization trends in major cities of the world, causing even more fossil fuel consumption and an increase in common pollutants, including sulphur dioxide, particulate matters, volatile organic compounds, ozone, lead, carbon monoxide and nitrogen oxide. The transport sector/vehicle emission is by far the major source of air pollutants.

46. Transboundary atmospheric problems such as haze, "atmospheric brown clouds", acid deposition and dust and sand storms show no signs of abating, endangering our health and adversely affecting the environment. Asthma and other respiratory and pulmonary effects, impairment of visual perception, gradual decrease in intelligence and premature deaths are on the rise.

47. The full impacts of atmospheric pollution on many species groups, especially those beyond the urban environment, as well as on agriculture and biodiversity, in general, are largely unknown and undocumented. The contribution of intensive agricultural and unsustainable practices such as straw burning in air pollution is a cause of concern. The transboundary haze issue that regularly affects South-East Asia is closely linked with deforestation and the expansion of commercial plantations, especially oil palm, in forested areas.[23]

48. Indoor air pollution is on the increase. Poor ventilation, congestion and the use of synthetic materials for building and furnishing, household care products such as glues, paints, paint strippers, wood preservatives, aerosol sprays, cleaners and disinfectants, moth repellents, air fresheners and stored fuels release chemicals resulting in elevated levels of indoor air pollution, creating the so-called sick building syndrome. Rural populations in developing nations suffer from the health-threatening smoke generated by burning traditional fuels like firewood, charcoal and cow dung used for cooking and heating.

49. Other sources of contamination of the air are chemicals originating from pesticide use in agriculture and extensive use of solvents in the electronics industry, textile and engineering sectors. More and more chemical industries are being established in developing countries where there is insufficient capacity to monitor, control and dispose of hazardous chemicals. Unsustainable production and consumption patterns and the adoption of post-industrial lifestyles in developing countries are contributing to worsening air quality.

Challenges

50. Institutions, international conventions, legislative frameworks, policies and strategies are in place to tackle air pollution issues. The multidimensional nature of air pollution problems and the lack of technical and financial capacities are hindering effective implementation on the ground and good intentions are not being translated quickly or adequately enough into concrete actions that improve overall air quality.

51. The International Convention on Chemicals Management and the Strategic Approach to International Chemicals Management will be useful to draw attention once again to these problems.

52. Practical issues still hinder progress in resolving problems. Air quality information for reporting, education and encouraging participation in policy formulation and clean air management is not readily available. Air quality monitoring, data collection and assessments are not sufficient, especially in most developing countries. Monitoring activities remain minimal (limited numbers, poor maintenance), and data is not always reliable. Differing monitoring techniques make comparisons difficult. Air pollution regulatory agencies in many developing countries often lack the technical capacity, adequate funds and even political teeth to sustain their work on air pollution index monitoring and enforcement.

53. Regional experiences in dealing with transboundary air pollution problems highlight the need to strengthen coordination and consultation within and between Governments and with local communities in monitoring the enforcement of preventive measures. It also underscores the need for the adoption of national legislations to sanction all violators, including companies.

Successful efforts in tackling air pollution problems

54. A notable success story in the international arena on improving air quality comes from the regulation of chlorofluorocarbons under the Montreal Protocol on ozone depletion. Chlorofluorocarbon production has dropped by 87 per cent between 1988 and 1997.

55. Successful efforts at the national level to integrate environmental and economic concerns have been a carefully calibrated combination of regulation and economic instruments to internalize environmental costs into product process. Some examples of these national efforts include:

(a) The European Union Directive (REACH) that imposes responsibilities on companies to prove that any chemical they produce or import in amounts greater than one ton per year is safe;

(b) The Republic of Korea's Indoor Air Quality Management Act, which set standards for formaldehyde and other polluting construction materials and was applied to 17 facilities, including hospitals, libraries, markets and subway stations;

(c) The United States Emergency Planning and Community Right-To-Know Act, which created a national database on toxic emissions and releases from manufacturing plants. The Toxic Releases Inventory allows citizens and the media to publicize the identity of major sources of toxic chemicals. However, current trends in the United States to deregulate are quite disturbing;

(d) The pollution levy system and reduced subsidies on the use of coal in China;

(e) The levy on the palm oil industry in Malaysia to reduce air pollution;

(f) Japan's enactment of a law on compensation for health damage caused by air pollution, which reduced sulphur dioxide emissions;

(g) Following many other countries, Thailand and Malaysia have now introduced differential pricing for leaded gasoline to address the lead problem.

NGOs, air pollution/atmosphere and the Commission on Sustainable Development review session

56. During the CSD review session, NGOs will challenge Governments to use the following as a basis for the CSD 15 outcome document:

(a) Prioritization of environmental governance issues, especially the need for more openness and transparency and addressing the importance of access to accurate, reliable and timely information, public participation in decision-making and access to justice in environmental matters;

(b) Empowering civil society organizations, including consumer groups, environmental organizations and locally affected communities;

(c) The need for adequate funding to build capacity of and technical expertise in air quality monitoring as well as the impact of chemicals on the atmosphere;

(d) There is a need to learn from the successes in order to replicate them, while acknowledging the differing circumstances of each issue;

(e) Greater coherence and cooperation between different multilateral environmental agreements and the multiplicity of assessment mechanisms such as the Millennium Ecosystems Assessment, the UNEP Global Environment Outlook and the Intergovernmental Panel on Climate Change (IPCC), etc;

(f) Better coordination of regional and national efforts on air pollution initiatives, regulation and enforcement measures based on sound scientific inputs;

(g) The need to consider issues pertaining to intellectual property rights and access to environmentally safe and sound technologies and the need to regulate industry, where appropriate;

(h) The development of integrated transport planning and bottoms-up approaches to urban management and development, as well as the need for community consultation and participation in planning;

(i) Tackling unsustainable patterns of consumption and production;

(j) Making a funding mechanism through the Global Environment Facility, similar to the one under the CFC Protocol, replicable in other areas pertaining to atmospheric pollution.

IV. Climate change

Trends

57. Throughout the last year, humanity has suffered dramatically due to apparent change in the climate and weather systems. In addition, IPCC, in its Third Assessment Report, raised the following pertinent questions:

(a) Is the meltdown of the Greenland ice sheet or the destabilization of the West Antarctic ice sheet dangerous?

(b) Is it dangerous to put 300 million people more at risk of contracting malaria? 50-120 million more people at risk of hunger? 100 million more people at risk of coastal flooding? More than 3 billion people at risk of water shortage?[24]

(c) Is significant damage to crop production in tropical and subtropical countries dangerous, which could, among other things, reverse progress in agricultural self-sufficiency in many developing nations?

(d) Are the annual deaths of 150,000 additional people, and 5 million more cases of debilitating diseases dangerous?[25]

58. The answers seem painfully obvious. Yet the refusal by key Governments to take these obligations seriously indicates either ignorance of the magnitude and immensity of the threat, or gross negligence in meeting their obligation to protect their populations by preventing dangerous climate change.

59. Scientific knowledge is increasing constantly. Some of the important new findings since the publication of the IPCC Third Assessment Report include:

(a) A major international study published in *Nature*,[26] which predicts that mid-range climate change scenarios will doom a million species to extinction by mid-century;

(b) The Arctic Climate Impacts Assessment commissioned by the Arctic Council[27] confirms that the Arctic is warming much faster than the rest of the globe and with global consequences including, but not limited to, sea level rise;

(c) The United States National Center for Atmospheric Research concludes that the amount of the Earth's surface suffering from drought has doubled in the last 30 years, at least half of that as a result of increased temperatures rather than changes in precipitation;[28]

(d) WHO has conservatively estimated that climate change is already causing 150,000 deaths and about 5 million serious illnesses per year, numbers which are expected to increase exponentially over the coming decades.[29]

Challenges in implementing global commitments — equity and ecological limits

60. Agenda 21, the Johannesburg Plan of Implementation and the United Nations Framework Convention on Climate Change (UNFCCC) are key instruments for addressing climate change. NGOs wish to remind Governments at CSD 14 of their obligations with regard to climate change.

61. Article 3 of the United Nations Framework Convention on Climate Change (UNFCCC) states:

> "The Parties should protect the climate system for the benefit of present and future generations of humankind, on the basis of equity and in accordance with their common but differentiated responsibilities and respective capabilities. Accordingly, the developed country Parties should take the lead in combating climate change and the adverse affects thereof."

Article 2 states:

> "The ultimate objective of this Convention ... is to achieve ... stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system ..., to ensure that food production is not threatened and to enable economic development to proceed in a sustainable manner."

62. Thus, it is the primary legal obligation of all Convention parties to prevent dangerous climate change and to agree on what constitutes "dangerous" climate change.

63. While discussions on long-term climate policy generally focus on stabilization levels for concentrations of greenhouse gases in the atmosphere, expressed in parts per million of carbon dioxide equivalent, NGOs consider that this is problematic for three main reasons:

(a) There is still considerable uncertainty about the precise sensitivity of the climate, that is, the long-term consequences of stabilization at a given level. Until recently the "best" estimate of the climate response to the doubling of carbon dioxide concentrations has been a 2.5° centigrade increase in global temperature. Recent studies have revealed that the climate sensitivity is more likely to be in fact closer to 3° centigrade, with a significant risk of it being much higher;

(b) Many have assumed that prevention of dangerous climate change would be associated with the stabilization of greenhouse gas concentrations at above current levels and sometime in the coming century or century and a half. However, under any scenario that avoids catastrophic climate change, concentrations are going to have to peak at as low a level as possible and then be reduced as rapidly as possible thereafter, or major impacts such as sea level rise will continue to increase for centuries;

(c) The numerical expression of a target for the concentration of a colourless odourless gas is utterly devoid of any means to relate it to human experience, i.e., the very impacts which would be associated with a given degree of temperature rise, and can be bandied about by pundits with no responsibility for the magnitude of human suffering that it entails.

64. NGOs are of the view that global mean temperature is the most appropriate surrogate for climate impacts of all kinds in operationalizing article 2. It is recognized that this has limitations, but policy needs to have a relatively simple measure to guide action and there is no other readily obvious measure that can be used in setting global targets. Where there is uncertainty in converting local and regional estimates of damages to the global mean level the precautionary principle should be applied. Once a global mean surface temperature limit has been agreed, this needs to be converted into greenhouse gas emissions over time frames ranging from five-year commitment periods to centuries.

65. Developing countries are most at risk from climate change, their problems increasing rapidly with rising temperature. Human activities leading to dangerous climate changes are caused largely by the consumption and production patterns of the wealthy industrialized countries impacting disproportionately the poor. Setting strong climate targets is therefore an equity issue, both in terms of present and future generations.

66. Due to historical and current greenhouse gas emissions, and the fact that emissions cannot be reduced to zero overnight, we are already condemned to future warming and sea level rise. This will cause increased risk of disease, hunger, water shortage and coastal flooding for between tens of millions and hundreds of millions of people. Major adaptation efforts will be required to minimize the adverse health, food security, water supply, storm and sea level rise consequences of these impacts.

NGOs outlining a basis for the outcome document at CSD 15

67. NGOs challenge the CSD Governments to address the following during their discussions at the CSD review session: climate change threatens not only the achievement of the Millennium Development Goals, it threatens to undo decades of development activities and indeed create conditions that make sustainable development impossible. "Up in Smoke"[30] concluded that a new paradigm of human progress and development was needed to slow, halt and reverse climate change as rapidly as possible ("climate friendly" development) and, at the same time, acknowledge the enormity of the task of adapting to climate change that is inevitable ("climate-proof" development).

68. NGOs also seek discussion of the following at the CSD review session:

(a) A global risk assessment of the likely costs of adaptation to climate change in poor countries;

(b) Commensurate new funds and other resources made available by industrialized countries for poor country adaptation, bearing in mind that rich country subsidies to their domestic, fossil-fuel industries stood at $73 billion per year in the late 1990s;

(c) Effective and efficient arrangements to respond to the increasing burden of climate-related disaster relief;

(d) Development models based on risk reduction and incorporating community-driven coping strategies in adaptation and disaster preparedness;

(e) Disaster awareness campaigns with materials produced at the community level and made available in local languages; coordinated plans, at the local and international levels, for relocating threatened communities with appropriate political, legal and financial resources.

69. Given the impacts enumerated above, responsible climate policy should ensure that:

(a) Global mean temperature increase should be kept below 2°C above pre-industrial levels, with the temperature being reduced as rapidly as possible after the time of peaking;

(b) The rate of warming be brought below a ceiling of 0.1°C temperature change per decade as soon as possible in order to allow ecosystems to adapt;

(c) Continuous assessment of these targets are made as our knowledge of climate change deepens and we gain experience in both responding and adapting to climate change; this would provide a good benchmark against which to measure progress on this issue, in relatively clear and simple terms. It would also give Governments something to focus on as they begin to negotiate the next phase of the climate regime after the first commitment period of the Kyoto Protocol finishes in 2012.

70. Ecological limits to climate change need to be set as a matter of urgency. Projected impacts are outlined in the following boxes, and are based upon the IPCC Third Assessment Report.[31] However, not included in this list are the relatively low but very real possibilities of abrupt and/or irreversible impacts, such as the shutdown of the North Atlantic thermohaline circulation system or the permanent disruption of the South Asian monsoon.

Box 1

Less than 1°C global mean warning

Developing countries

- Net negative market sector impacts in developing countries and net market sector gains in developed countries; applying more weight to impacts on poor countries indicates negative aggregate impacts globally
- Livelihoods of the most vulnerable populations adversely affected

Water

- Shrinking ice and snow cover disrupts hydroelectric capacity and systems dependent on spring thaw timing

Ecosystems

- Changes in growing seasons, shifts in population ranges, premature reproduction in plants, insects; birds threaten the integrity of complex systems dependent on timing of seed dispersal, pollination, availability of food, etc.
- Extinction of some critically endangered and endangered species also by rising sea levels and shrinking ranges

Box 2

1-2°C global mean warming

Developing countries

- Many developing countries will suffer from net market losses in important sectors
- Globally some regions may have net market benefits and others, principally developing countries, have net market losses
- Majority of people adversely affected by climate change and livelihoods of the most vulnerable populations dependent on natural ecosystems increasingly adversely affected

Food security

- Likelihood of significant damages to crop production in tropical and subtropical countries sufficient, among other things, to reverse agricultural self-sufficiency progress in many developing nations; heat waves will damage crops (rice unable to form grains, fruit unable to set) and livestock will suffer from heat stress (reductions of milk production and conception difficulties in dairy cows)

Water shortage

- Decreased water supply and quality will occur in regions already suffering from water scarcity and drought such as the Mediterranean region, southern Africa and arid parts of Central and South Asia, affecting half a billion people

Floods

- More flood damage will result from intense storms, especially in areas affected by deforestation wildfires, insect infestations, and ecosystem degradation

Extreme events

- Increasing frequency and intensity of extreme weather events will result in increased insurance costs and decreased insurance availability (coastal areas, floodplains)

Health effects

- Direct — increased heat-related deaths and illness, affecting particularly the elderly, the sick and those without access to air conditioning
- Indirect — more illness and death resulting from increased frequency and intensity of extreme weather events
- Increased risks to human life, risk of infectious disease epidemics and many other health risks where floods, droughts or storms increase in frequency and/or intensity

Ecosystems

- Wildfires and insect infestations will disrupt relationships in complex ecosystems already undergoing stress from direct effects of heat; increased disturbances of ecosystems by fire and insect pests
- Coral bleaching events will increase in frequency and duration, leading to destruction of brain corals and loss of related reef ecosystems
- Loss of up to 10 per cent of coastal wetlands globally from sea level rise will eliminate habitat of major migratory bird populations
- 30-40 per cent of nature reserves adversely affected

Ice sheets and sea level rise

- Meltdown of the Greenland ice sheet is likely with global mean warming above 1-3°C, which would lead to several metres' sea level rise over several centuries with disastrous consequences for millions

Box 3
2-3°C global mean warming

Developing countries

- Most regions (developed and developing countries) will suffer net market losses in important sectors that will affect global economic aggregates (e.g. net global economic losses are likely)

Food security

- 50-120 million more people at risk of hunger; food prices will increase throughout the global economy
- Crop yields will drop in regions affected by more frequent drought conditions, and there is likely to be a general decrease in cereal crop yields extending beyond the tropics to mid-latitude and temperate regions

Water shortage

- More than 3 billion more people at risk of water shortage

Floods

- 100 million more people at risk of coastal flooding

Extreme events

- The incidence of floods, droughts and other extreme events will increase

Health effects

- It is likely that 300 million more people would be at greater risk of contracting malaria and much increased exposure to dengue fever

Ecosystems

- Loss of unique ecosystems and their endemic species (e.g. Cape region of South Africa and some cloud forests)
- Substantial damage to coral reefs, reduced species biodiversity and fish yields from reefs
- Significant damage or disruption to arctic ecosystems, boreal forests, mountain ecosystems

Ice sheets and sea level rise

- Rapid decay of the Greenland ice sheet appears likely in this temperature range leading to 1 to 2 metres of sea level rise by 2500 and 2.3 to 3.5 metres over the next thousand years, depending on the extent of the heating
- The model range for sea level rise induced by thermal expansion is 0.44-1.96 metres by 2500, far greater than for 1000 years — 0.53m-1.96m (in the event of doubling of carbon dioxide)
- Increasing risk of instability or decay of the West Antarctic ice sheet

Box 4

3-4°C global mean warming

The IPCC was unable to assess impacts in details for temperatures much in excess of the 2-3° centigrade warming range due to lack of literature; however, the following general conclusions can be made:

Developing countries

- Economic damage increases more quickly

Food security

- Food security situation worsens

Water shortage

- Water shortages worsen

Floods and extreme events

- More floods and other extreme events

Health effects

- Adverse health effects worsen

Ecosystems

- Elimination of tropical glaciers and significant reduction in ice cap and temperate glacier volume will alter hydrology and dependent ecosystems
- Coral death from sea temperature increases lasting for six months or more will eliminate whole reef ecosystems
- Other ecosystems under threat include atolls, mangroves, boreal and tropical forests, alpine meadows, prairie wetlands and remnant native grasslands

Ice sheets and sea level rise

- The decay of the Greenland ice sheets appears to be virtually certain at this level of warming

Notes

[1] Report of the World Commission on Environment and Development, 1987.

[2] OECD 1952 and Principle 16 of the Rio Declaration on Environment, 1992.

[3] Principle 15 of the Rio Declaration on Environment and Development, 1992.

[4] An example of a new approach to energy management is the soft energy path (SEP), initiated by the Rocky Mountain Institute. Through that approach, between 1975 and 2000, energy efficiency produced more energy than did new power plants.

[5] A methodology has been developed by Sustainable Energy Watch (SEW) using a set of eight indicators to assess the contribution of energy policy to the eco-development of a country.

[6] E/CN.17/1998/4, para. 12.

[7] From a speech by Anna Fielder, Regional Director (CI) to the European Economic and Social Committee, 15 March 2005.

[8] Donald J. Johnston, Secretary-General OECD. August 2002, *Sustainable development: Our common future*.

[9] The Co-Chairs' summary of the working group on production processes and industrial development, the last International Meeting on sustainable consumption and production in Costa Rica.

[10] Consumers International, with the UNEP DTIE, carried out a survey of government awareness of and response to section G on sustainable consumption of the United Nations guidelines for consumer protection in 2001, launched in Bali in 2002, updated in 2004.

[11] Johannesburg Plan of Implementation, chapter III, called for the development of "a 10-year framework of programmes in support of regional and national initiatives to accelerate the shift towards sustainable consumption and production". The first international expert meeting on the 10-year framework took place in Marrakech, Morocco, 16-19 June 2003, organized by the Department for Economic and Social Affairs. The meeting launched the "Marrakech-Process".

[12] World Resources Institute (2000). *The Weight of Nations: Material Outflows from Industrial Economies*.

[13] Ministerial Statement, the World Summit on Sustainable Development. Regional Ministerial Meeting for the World Summit on Sustainable Development, Economic Commission for Europe (ECE), Geneva, Switzerland, 24-25 September 2001.

[14] OECD (2002). *Towards Sustainable Household Consumption? Trends and Policies in OECD Countries*.

[15] World Resources Institute (2000). *The Weight of Nations: Material Outflows from Industrial Economies*.

[16] Kanniah and Manokaran (2004). *Sustainable Consumption in the Context of Sustainable Production*. Consumers International Asia Pacific Office. March 2004.

[17] Second International Expert Meeting on the 10-Year Framework for Programmes for Sustainable Consumption and Production. Costa Rica, 5-8 September 2005.

[18] See: http://europa.eu.int/comm/employment_social/soc-dial/csr/country/netherlandsl.htm.

[19] Consumentenbond (2004). *Research conclusions on CSR*. Briefing paper forwarded by Melanie Peters.

[20] Kanniah and Manokaran (2004).

[21] Ibid.

[22] http://www.newsbytes.com/nes/01/167371.html.

[23] In response to this transboundary environmental problem, the Association of Southeast Asian Nations (ASEAN) adopted a regional haze action plan in 1997, adopted measures to prevent forest fires and to cooperate in regional monitoring and mitigating measures, further adopting in 2002 the ASEAN Agreement on Transboundary Haze Pollution. The Agreement created the ASEAN Coordinating Centre for Transboundary Haze Pollution Control, along with the ASEAN Transboundary Haze Pollution Control Fund.

[24] Parry, M., et al., "Millions at Risk", Global Environment Change, 11:3 (2001); see www.cru.uea.ac.uk/tiempo/floor0/archive/issue4445/t4445a7.htm.

[25] Supra note 24.

[26] Thomas, et al., "Extinction risk from climate change", *Nature*, vol. 427, 8 January 2004.

[27] Stott, et al., "Human contribution to the European heatwave of 2003", *Nature*, vol. 438, 2 December 2004.

[28] Jonathan A. Patz, Diarmid Campbell-Lendrum, Tracey Holloway and Jonathan A. Foley, "Impact of regional climate change on human health", *Nature*, vol. 438, 17 November 2005.

[29] Simms, A., Magrath, J., Reid, H., et al., "Up in Smoke? Threats from, and responses to, the impact of global warming on human development", 2004; see www.neweconomics.org/gen.

[30] Ibid.

[31] This summary of impacts is drawn from Climate Action Network paper entitled "Preventing dangerous climate change"; see www.climnet.org/pubs/CAN-adequacy 30102002.pdf.